How to Use American Community Survey (ACS) Geodatabase Files

March 10, 2021

Dial-in (For Audio): 1-877-918-2514 (Passcode: 4253419)

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U.S. Census Bureau

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Esri, Inc.

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Slides available at:
census.gov/programs-surveys/acs/news/events/acs-geodatabase-webinar.html

The American Community Survey
Outline

- **American Community Survey (ACS) basics**
- About the geodatabase files
- Accessing and downloading the geodatabase files
- Using metadata tables to identify full descriptions
- Joining feature class to tables
- Resources for learning more
- Questions

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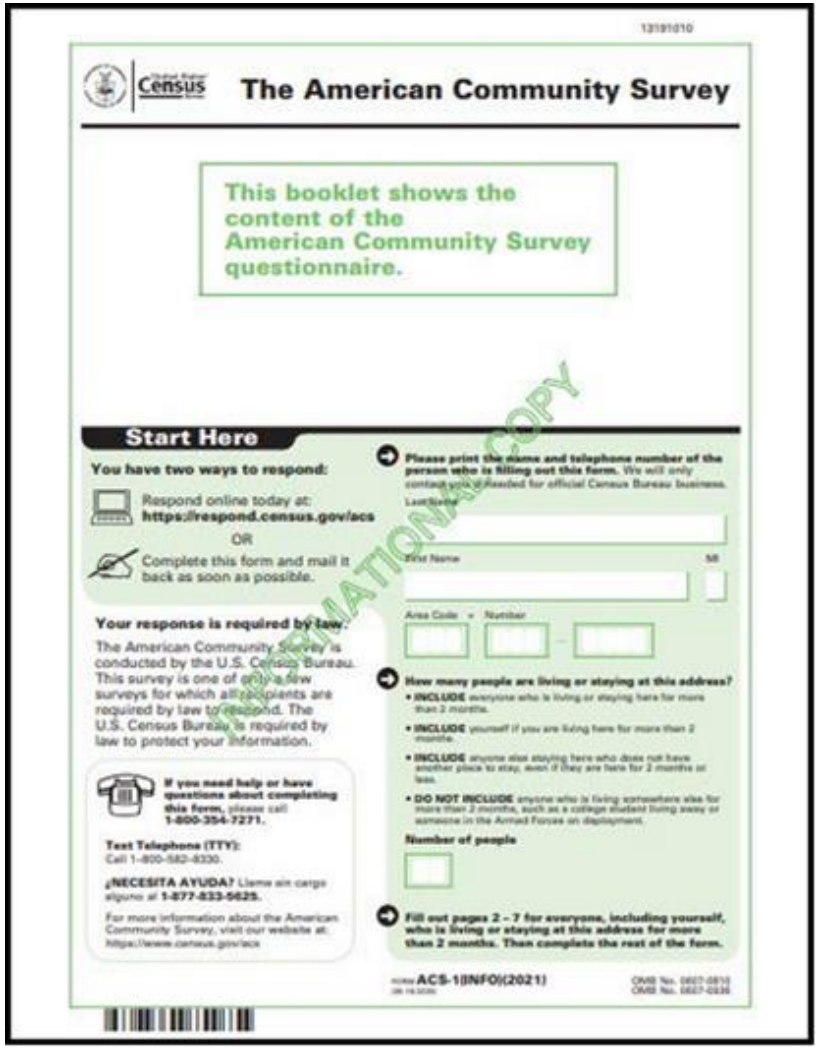
The American Community Survey

The Foundation

The American Community Survey is on the leading edge of survey design, continuous improvement, and data quality

- The nation's most current, reliable, and accessible data source for local statistics on critical planning topics such as age, children, veterans, commuting, education, income, and employment
- Surveys **3.5 million** addresses and informs over **$675 billion** of Federal government spending each year
- Covers **40+ topics**, supports over **300** evidence-based Federal government uses
- Three key annual data releases:
  - 1-year Estimates (for large populations)
  - 1-year Supplemental Estimates (for small populations)
  - 5-year Estimates (for very small populations)



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Availability of Data Products

Estimated Population of Geographic Area	1-Year Estimates	1-Year Supplemental Estimates	5-Year Estimates
65,000 or more	X	X	X
20,000 to 64,999		X	X
Less than 20,000			X
Release Date	**September 2021**	**October 2021**	**December 2021**

census.gov/programs-surveys/acs/news/data-releases.html

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How is the American Community Survey Different from a Census?

	ACS	Census
Purpose	Sample estimates	Official counts
Collects	Detailed social, economic, housing, and demographic characteristics	Basic demographics
Produces	Population and housing characteristics	Population and housing totals
New Data Every	Year	10 years
Data Reflect	Period of time	Point in time

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Data Collection Process

SELF-RESPONSE

NONRESPONSE FOLLOWUP

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ACS Content

POPULATION		HOUSING
SOCIAL Ancestry Citizenship Citizen Voting Age Population Disability Educational Attainment Fertility Grandparents Language Marital Status Migration School Enrollment Veterans	**DEMOGRAPHIC** Age Hispanic Origin Race Relationship Sex **ECONOMIC** Class of Worker Commuting Employment Status Food Stamps (SNAP) Health Insurance Hours/Week, Weeks/Year Income Industry & Occupation	Computer & Internet Use Costs (Mortgage, Taxes, Insurance) Heating Fuel Home Value Occupancy Plumbing/Kitchen Facilities Structure Tenure (Own/Rent) Utilities Vehicles Year Built/ Year Moved In

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Table/Profile Numbering

B06004APR

- B=Data Product Type (Detailed Table)
- 06=Subject (Place of Birth)
- 004=Sequential Number (2 or 3 digits)
- A=Race/Hispanic Origin (White Alone)
- PR=For Puerto Rico Geographies Only

census.gov/programs-surveys/acs/guidance/which-data-tool/table-ids-explained.html

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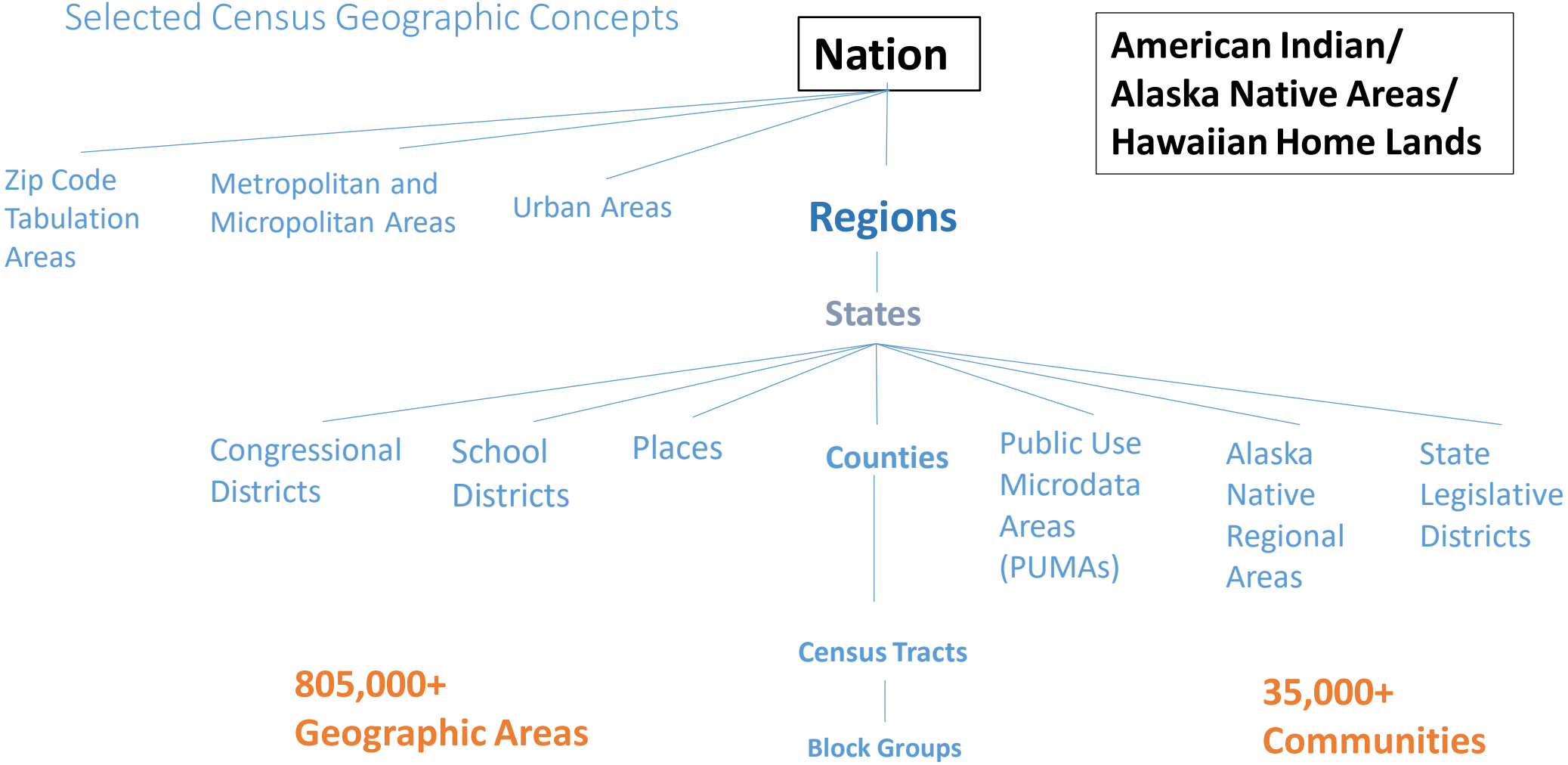
Selected Census Geographic Concepts



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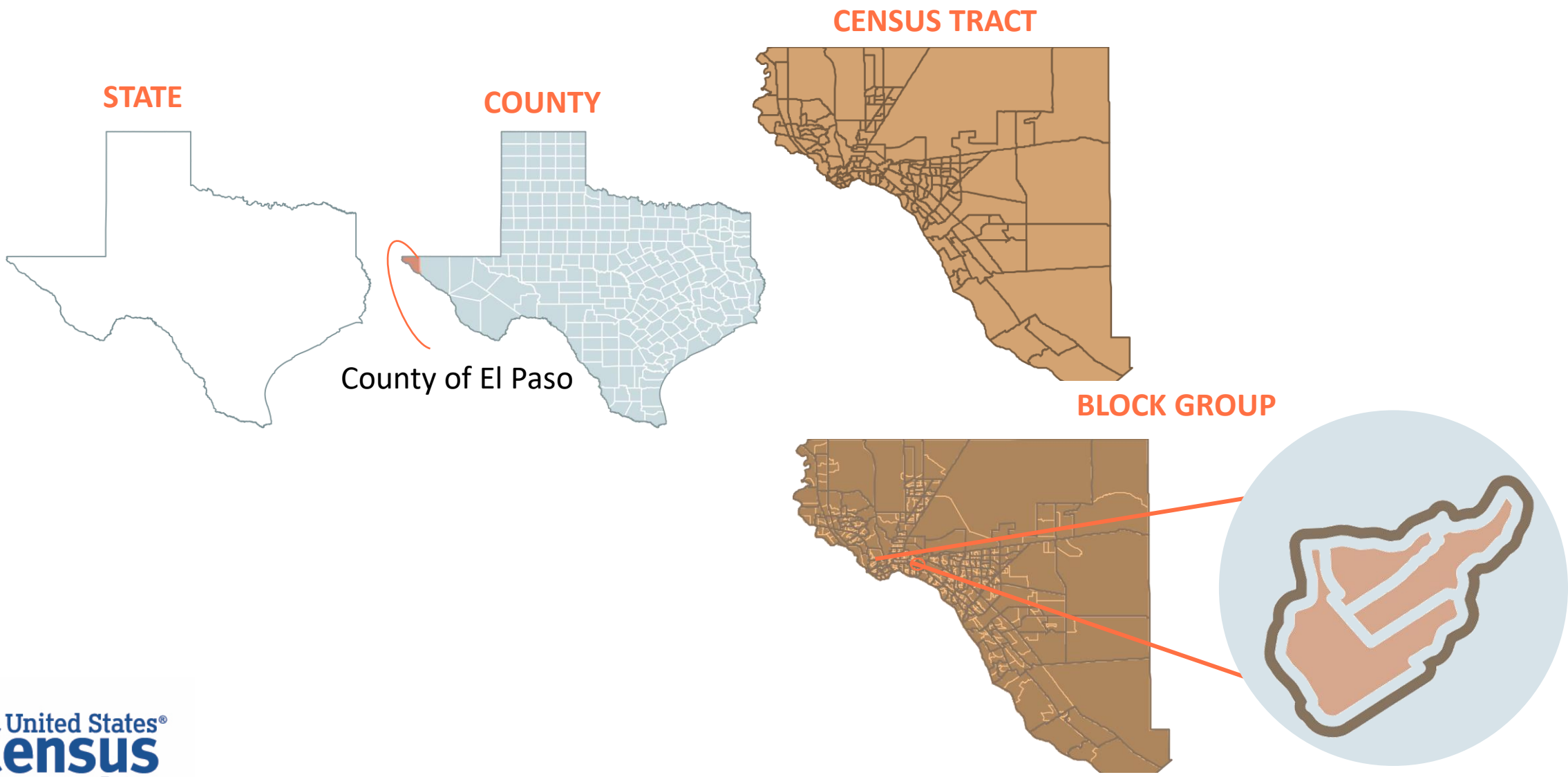

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What is a Geodatabase?

- A “TIGER/Line with Selected Demographic and Economic Data” geodatabase file contains geographic boundary data pre-joined with demographic and economic data variables.
- A geodatabase is a geographic file that can only be used in Esri ArcGIS and related software.
- Files are released in the Spring following the ACS 5-year estimate file release.

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Where do I find these files?

- Go to Census.gov.
- Click Browse by Topic – Geography.
- Choose “Geographies”.
- Click on 2018.
- Choose TIGER/Line with Selected Demographic and Economic Data.
- Choose the geography that you are interested in and download, or download from the ftp site.

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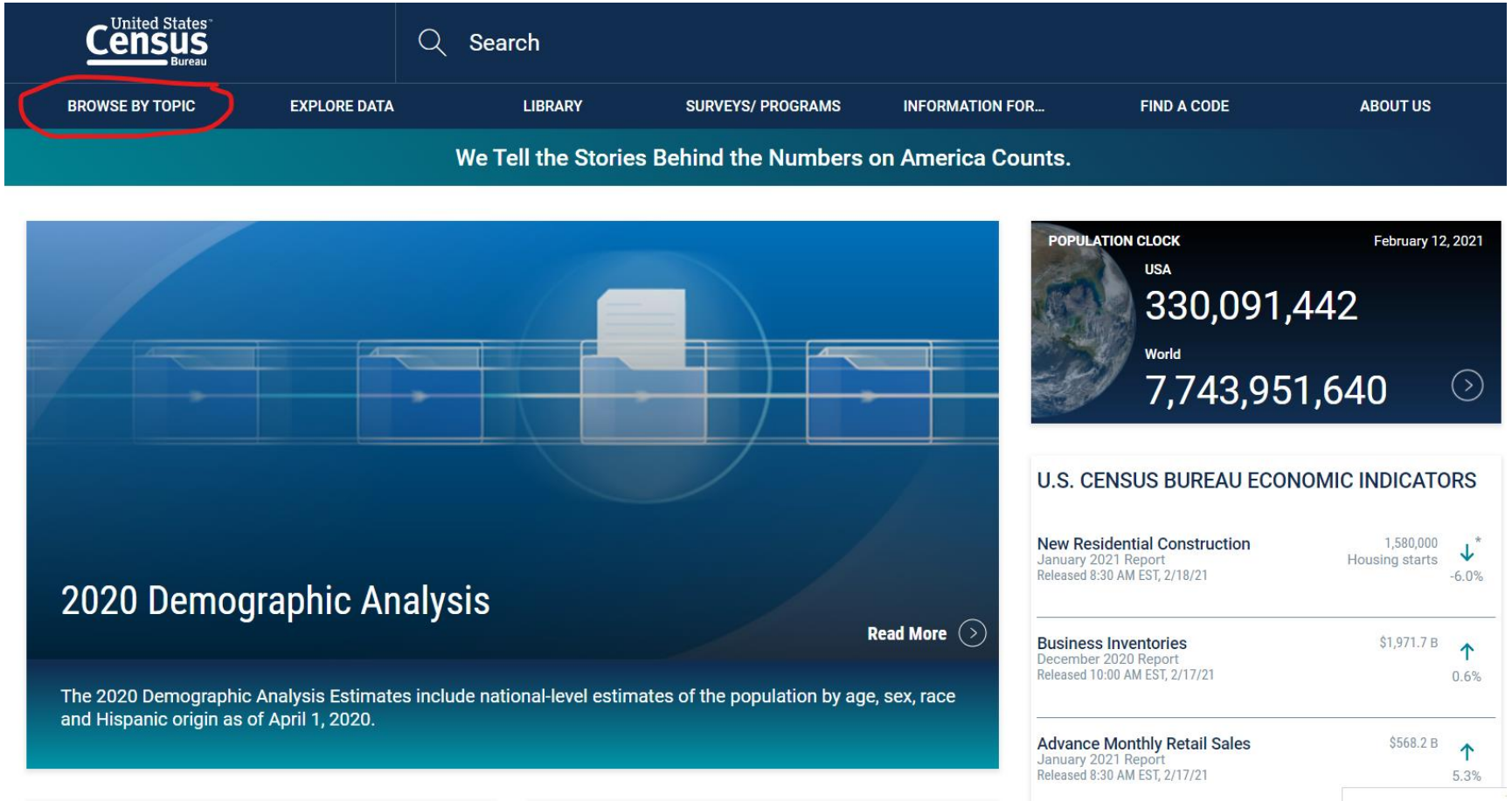
Where do I find these files?



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Where do I find these files?

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Search

BROWSE BY TOPIC | EXPLORE DATA | LIBRARY | SURVEYS/ PROGRAMS | INFORMATION FOR... | FIND A CODE | ABOUT US

// Census.gov > Our Surveys & Programs > **Geography Program**

GEOGRAPHY PROGRAM

- About this Program
- Data
- Geographies
- Guidance for Geography Users
- Library
- Technical Documentation
- Updates
- Contact Us
- < Back to Our Surveys & Programs

Geography Program

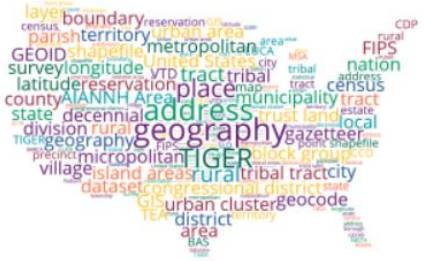
Geography is central to the work of the Census Bureau, providing the framework for survey design, sample selection, data collection, tabulation, and dissemination. Geography provides meaning and context to statistical data.

Read More

About

Interactive Maps

Geographies



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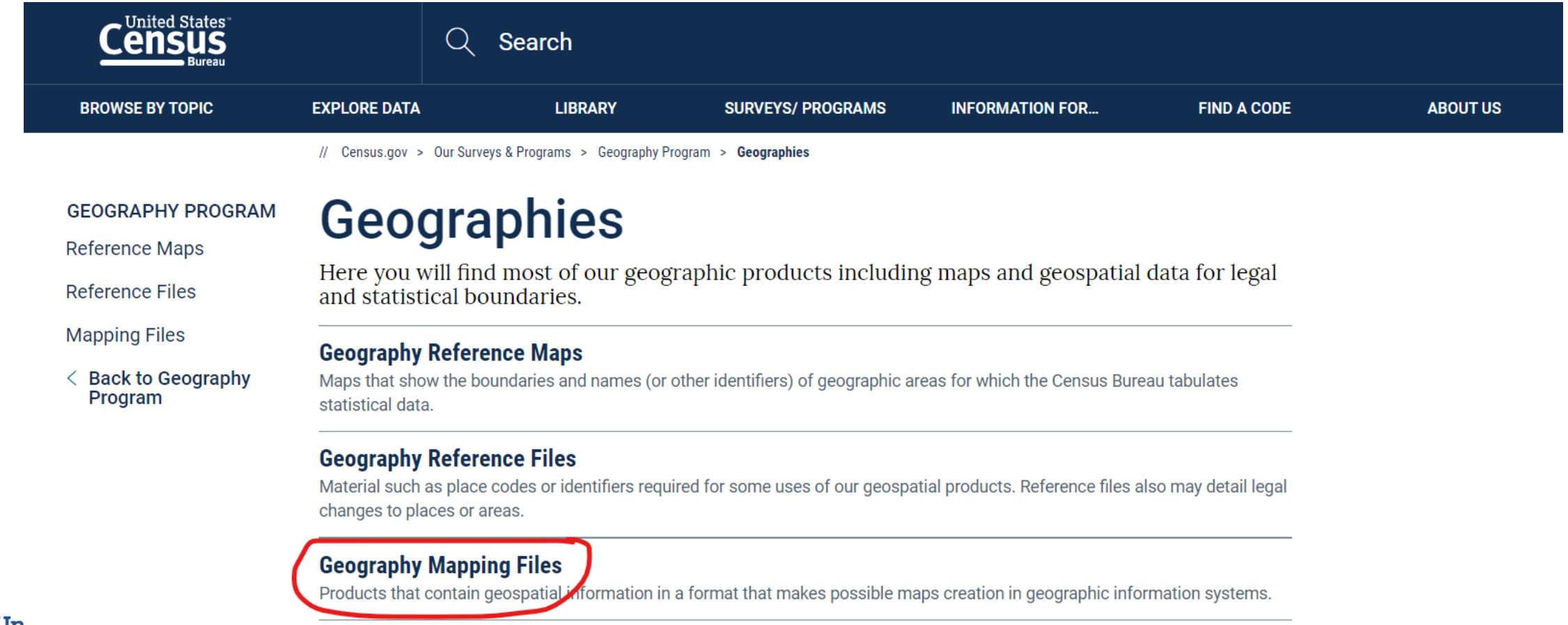

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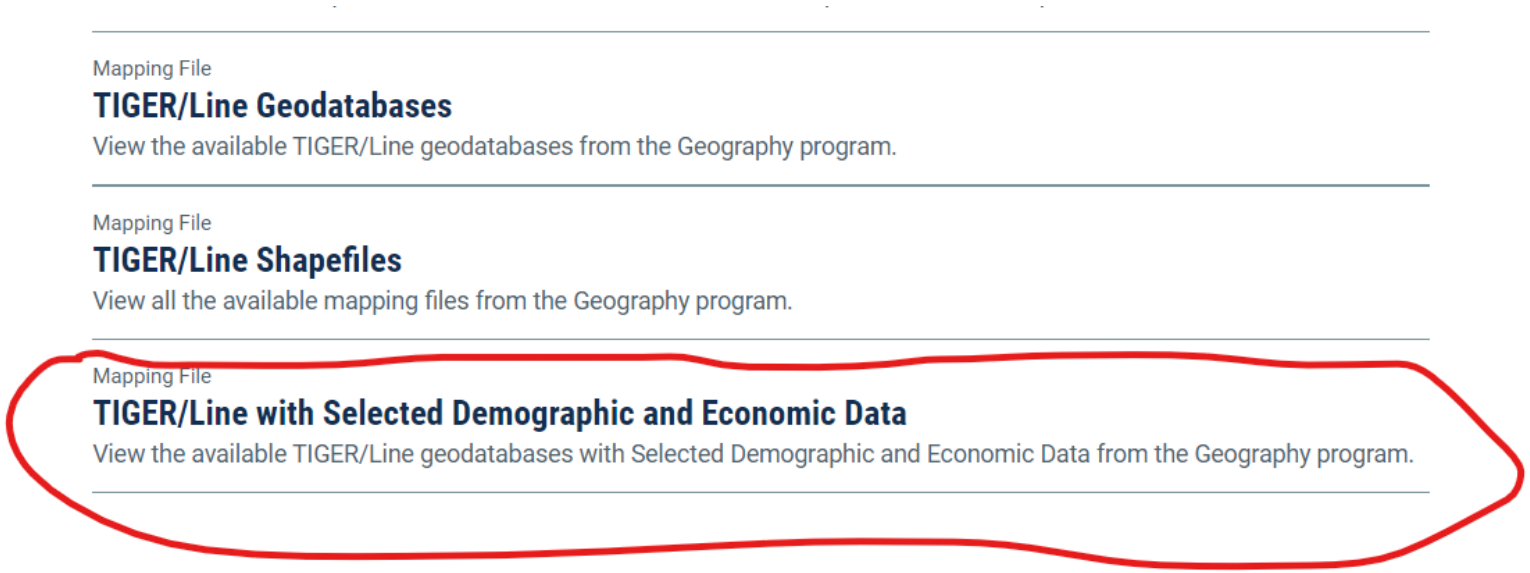

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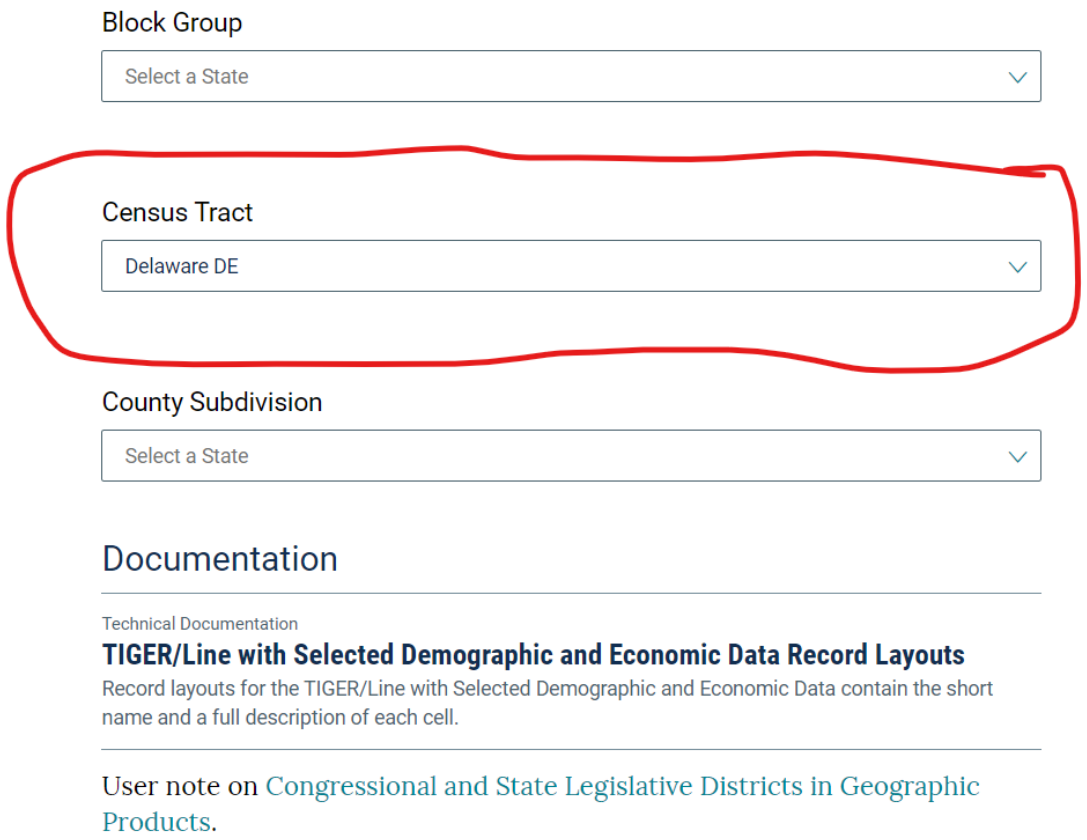

Unzip Downloaded File

- You will need to unzip the downloaded geodatabase using a zipping software such as WinZIP.
- Save the unzipped files where you can find them to use in ArcGIS.

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Geodatabase Technical Document

- Technical Documentation for the “TIGER/Line with Selected Economic and Demographic Data” files is available at the bottom of the page where you downloaded the files, or on the right-hand side under Related Information.

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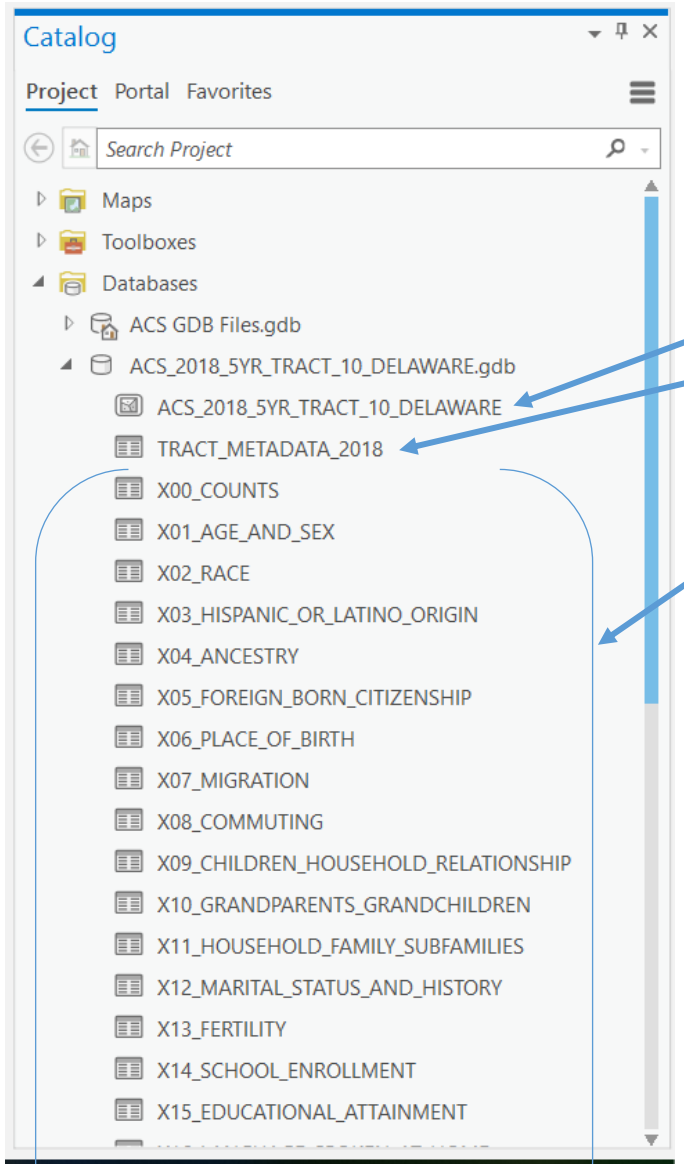
Connect to the geodatabase



Add items to map:

1. Polygon feature class
2. Metadata table
3. Attribute table(s)

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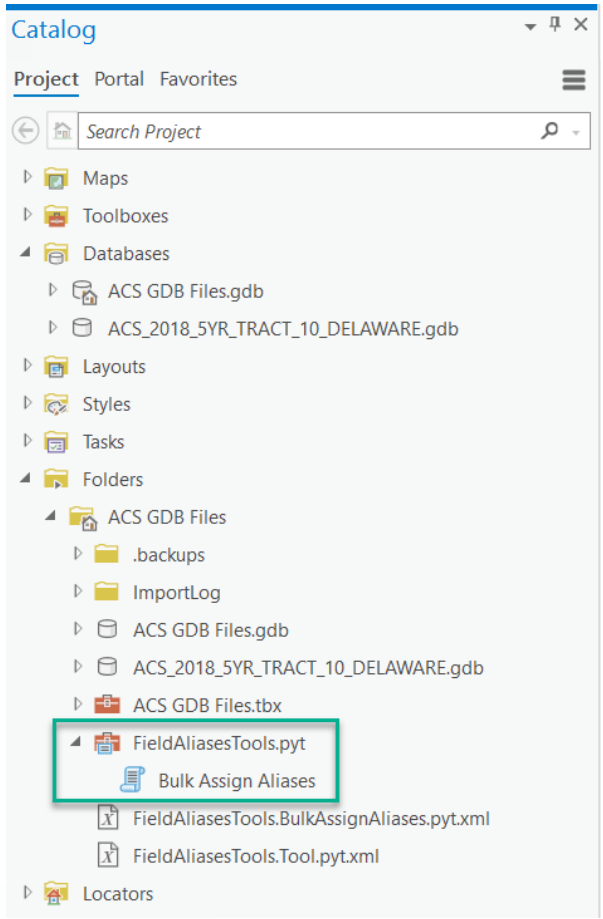
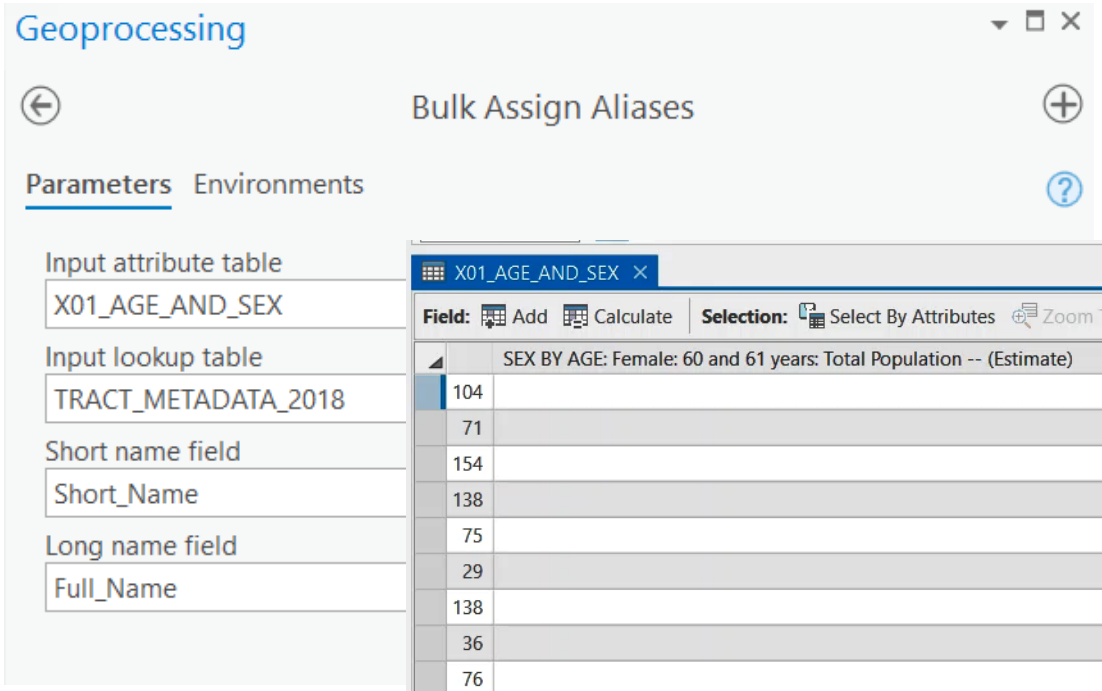
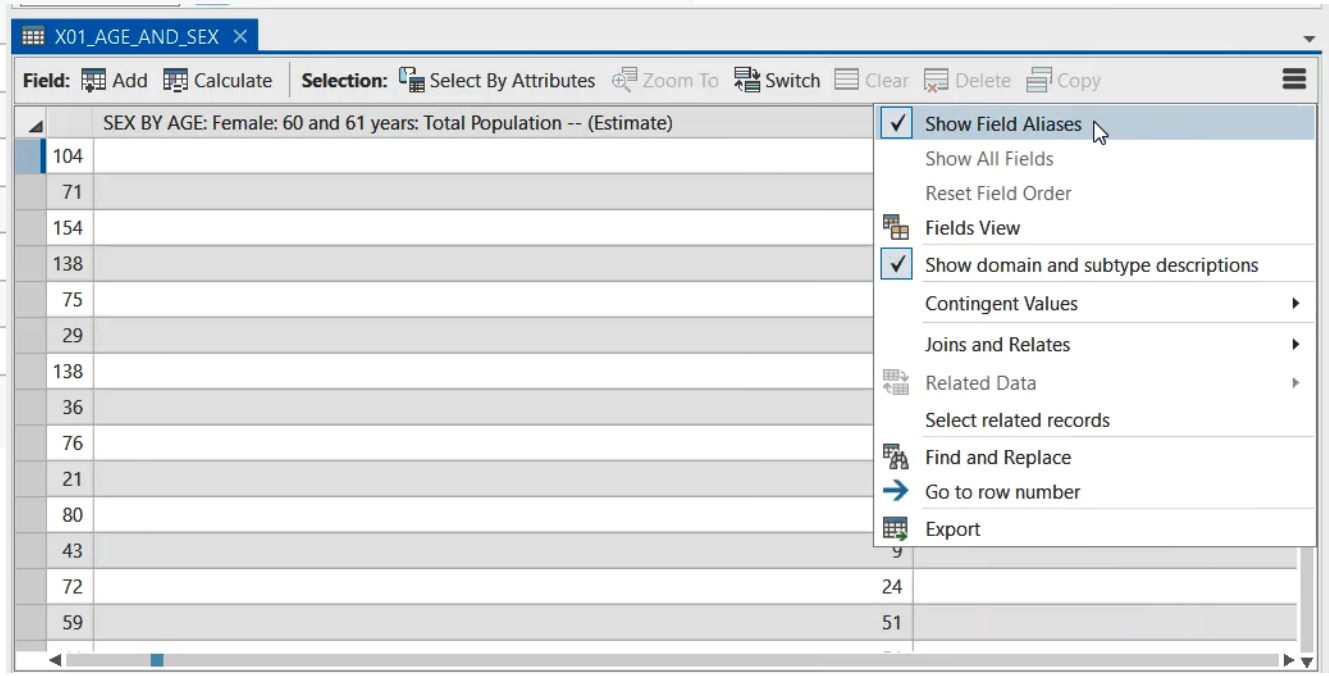
Use metadata table to apply field aliases

https://www.esri.com/arcgis-blog/products/arcgis-pro/data-management/bulk-assign-field-aliases/







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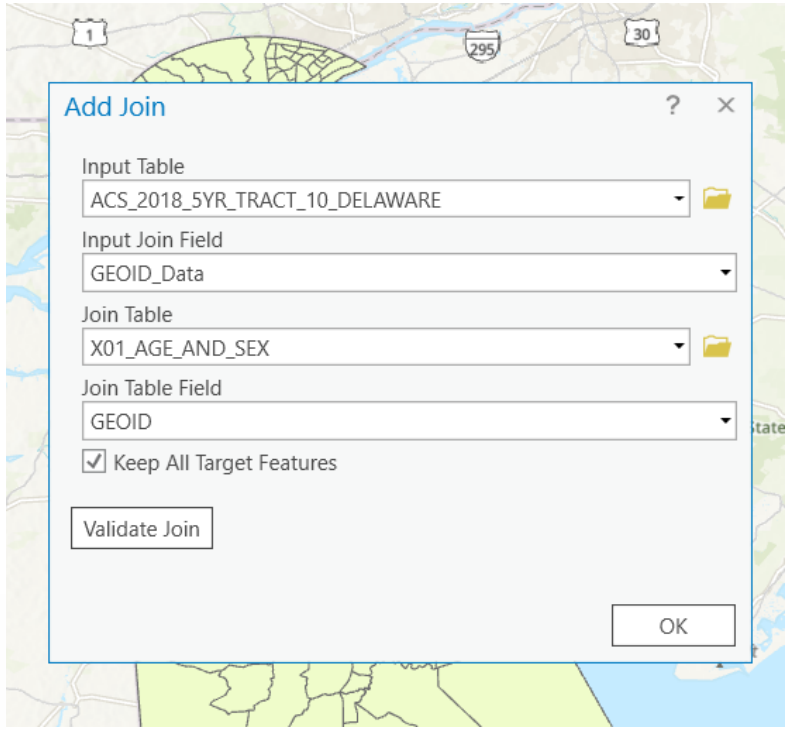
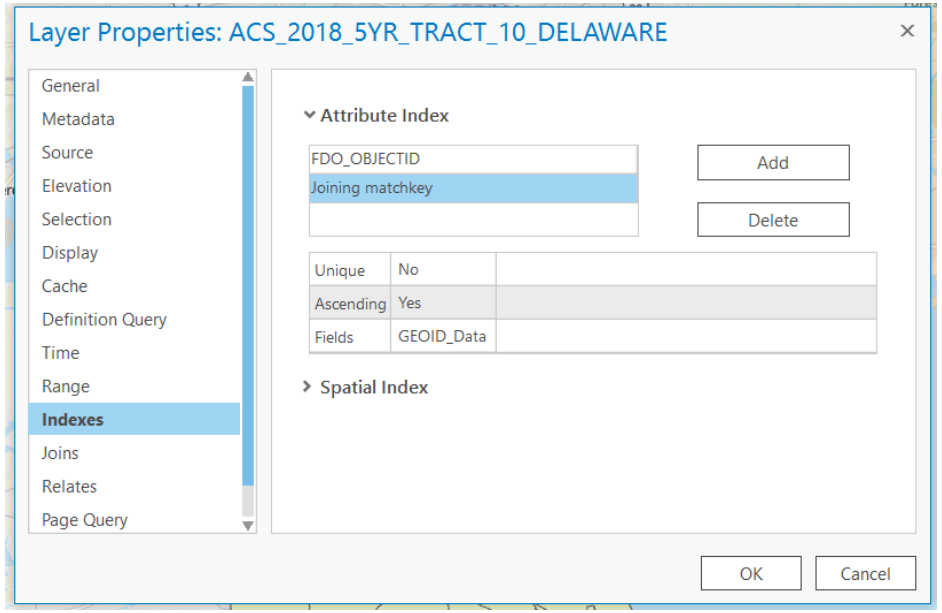
Join attribute table to polygons

- GEOID in attribute tables matches to GEOID_Data in feature layer

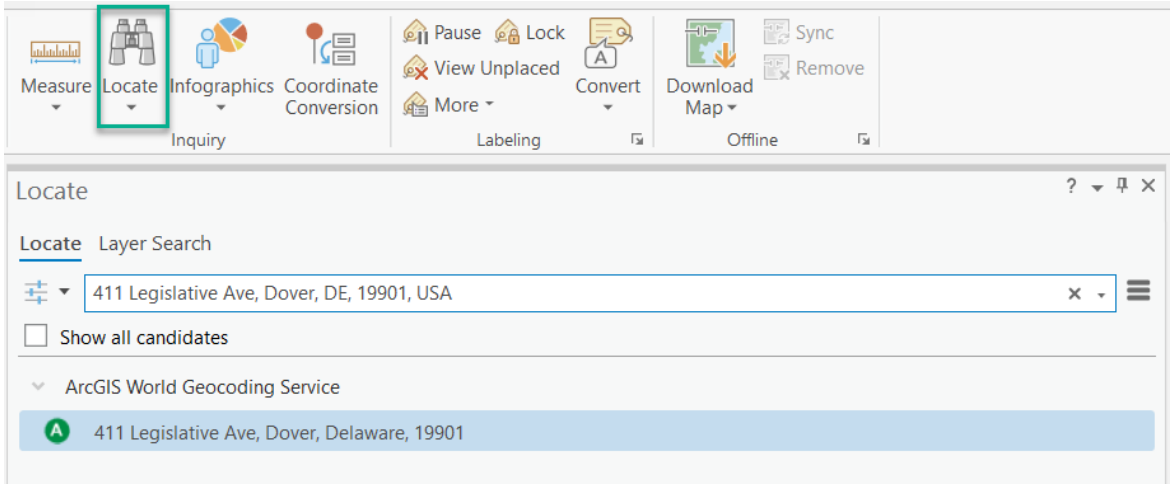


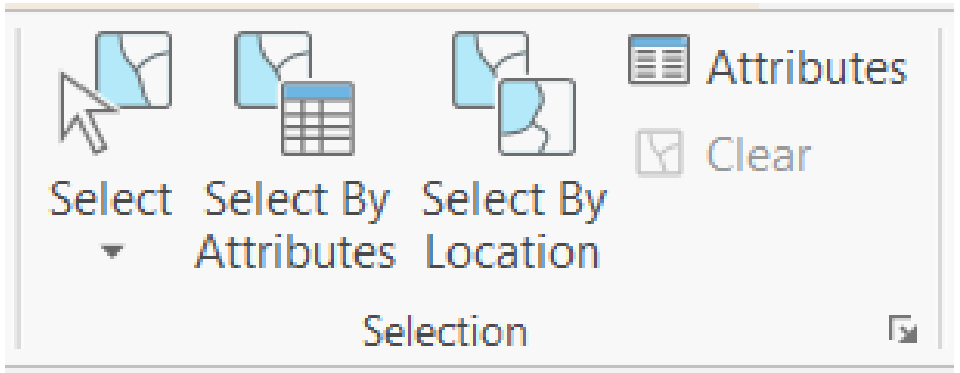
- Add an index on polygon layer for improved performance



Tips and Tricks for Common Workflows

- Export features to create a permanent layer from your join
- Use Locate tool to search an address and see what tract it's in
- Select by attributes to identify areas that meet specified criteria
- Select by location using your polygons to see what tracts/block groups are contained within your areas





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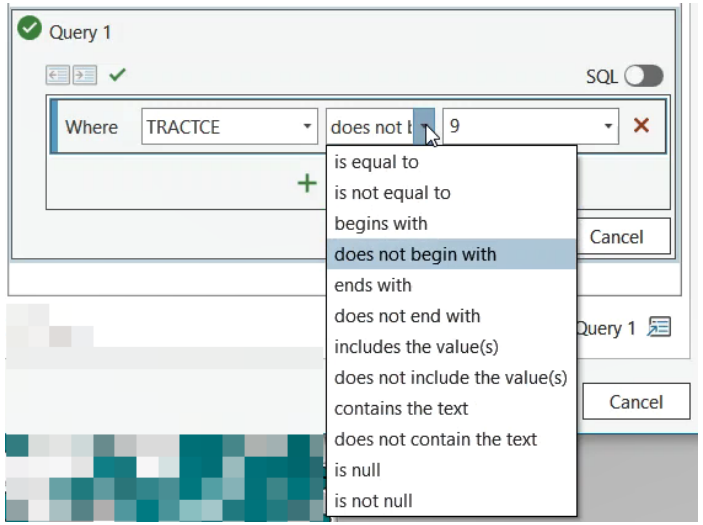
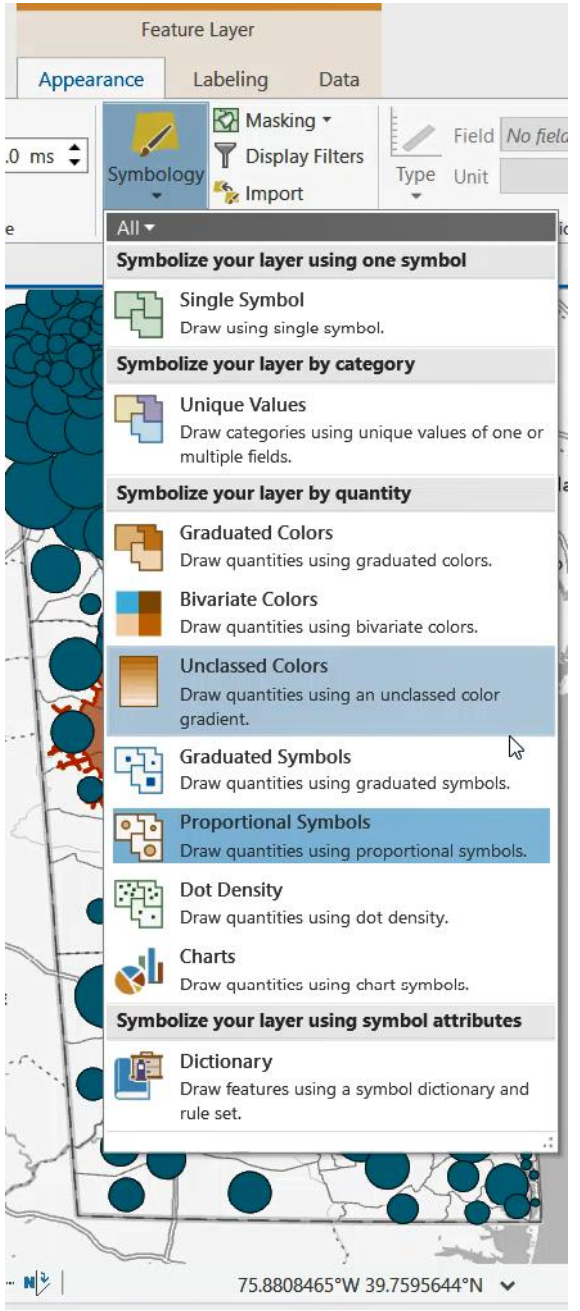
Tips and Tricks for Mapping

- Set definition query so that water tracts are not displayed
- Symbolize counts and integers with size, percentages and rates with color
- Unclassed color ramps let the data breathe
- Use a neutral basemap that won't compete with your colors





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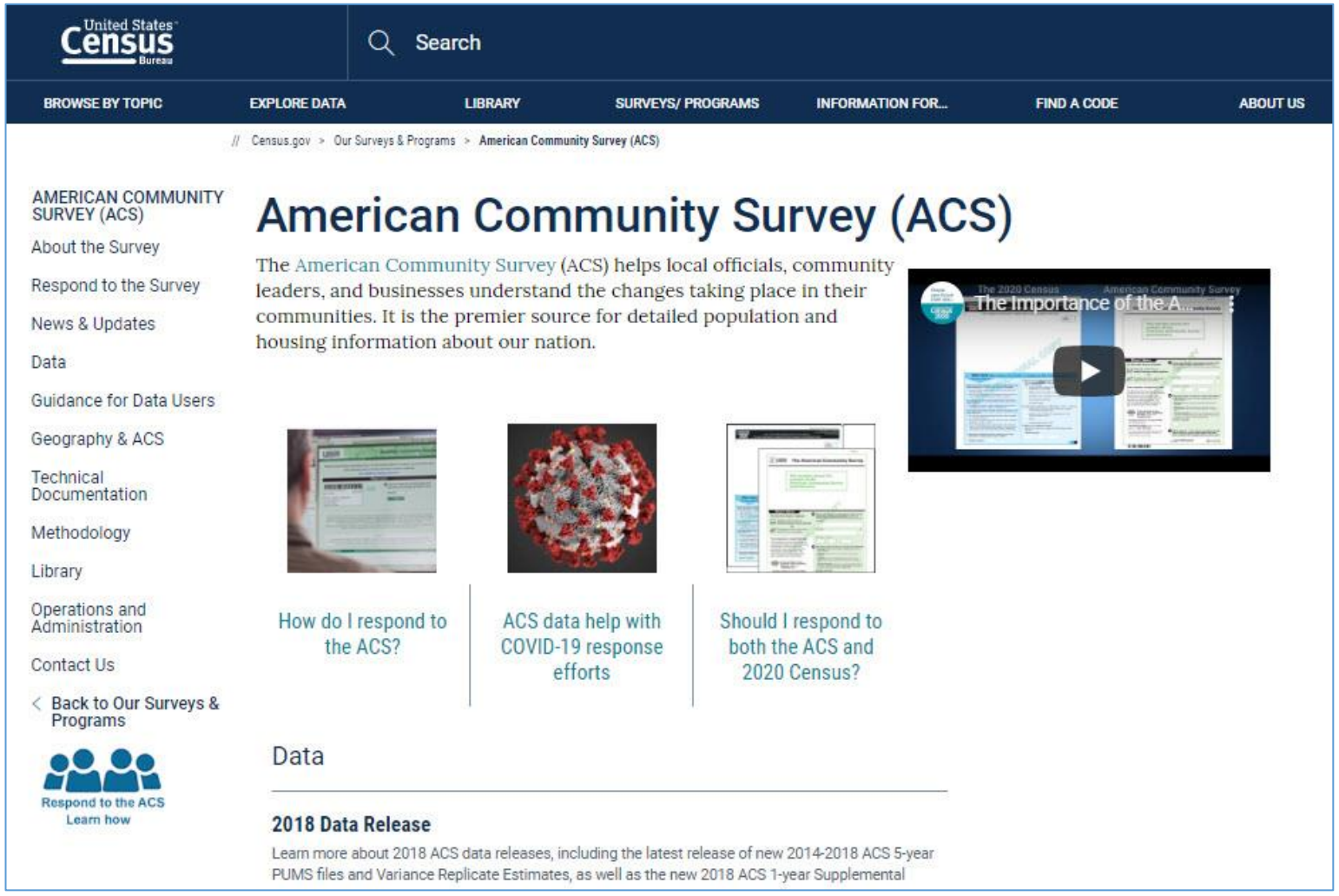
Main Page



census.gov/acs

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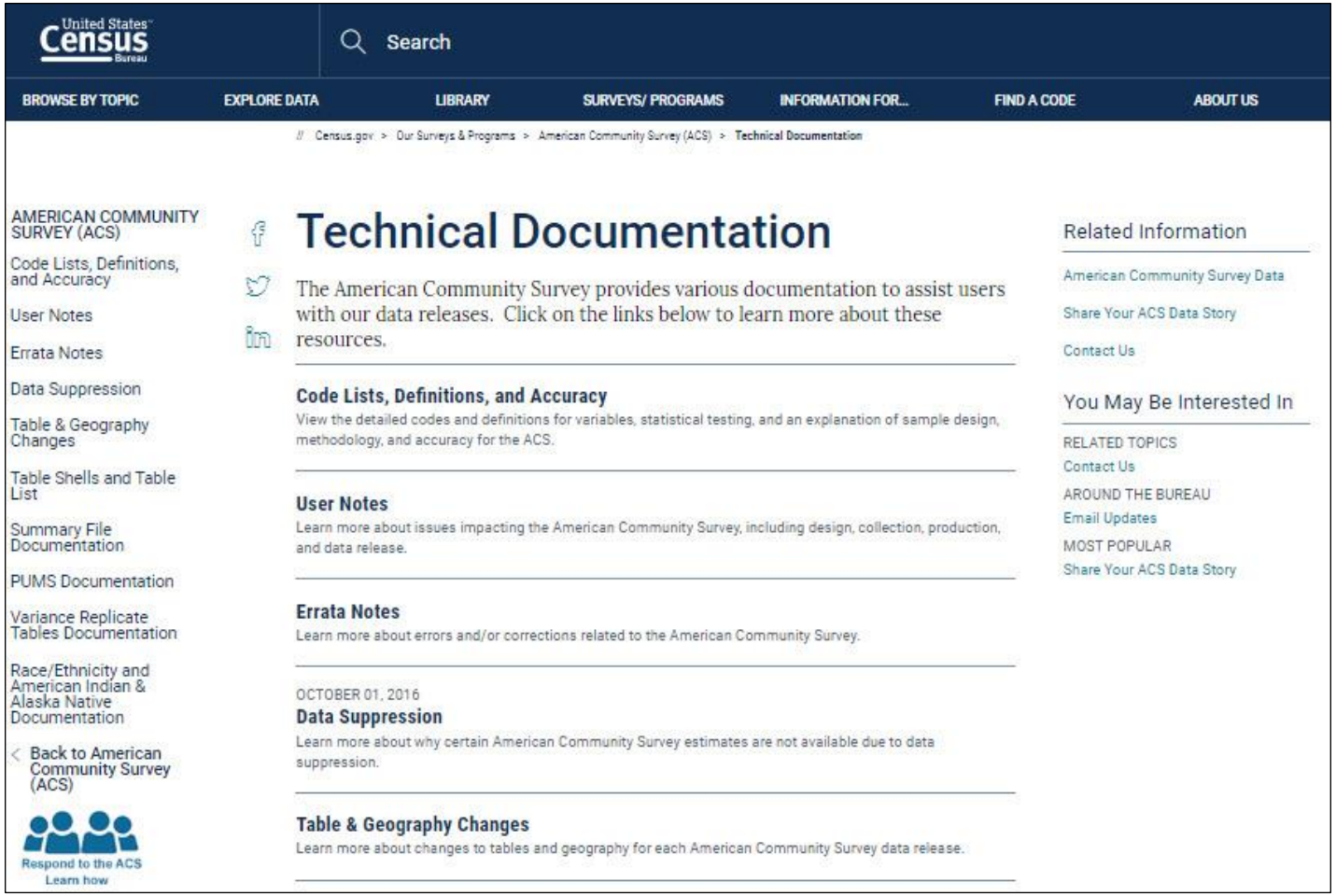
Technical Documentation Page



census.gov/programs-surveys/acs/technical-documentation.html

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The American Community Survey

Data Tell Stories. Tell us Yours!

Your story

Your data details

Your outcome

census.gov/acs/www/share-your-story

census.gov/programs-surveys/acs/about/acs-data-stories.html

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AMERICAN COMMUNITY SURVEY DATA USERS GROUP

- Purpose:
  - Improve understanding of the value and utility of ACS data.
  - Promote information sharing among data users about key ACS data issues and applications.
- Includes users group website and online community
- Webinars and special sessions at professional meetings planned
- Membership is free and open to all interested ACS data users
- ACS Data Users Conference: May 18-20th (**Save the Date!)**

acsdatacommunity.prb.org

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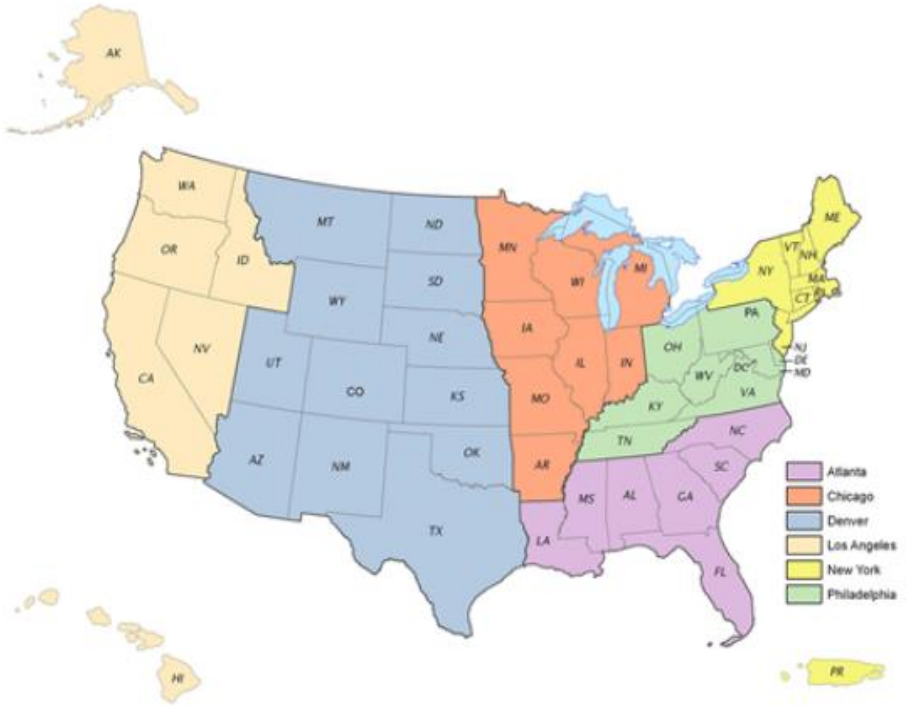
Need Local Stats?

- FREE Assistance Near You!
  Our regional data staff can help you access local statistics from the ACS or offer training to help build your skills.
- Contact us at:

  1-844-ASK-DATA

  (1-844-275-3282)

  census.askdata@census.gov



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Continue the Conversation

Sign up for and manage alerts at
https://public.govdelivery.com/accounts/USCENSUS/subscriber/new

More information online:
census.gov/acs
census.gov/geo

Census Customer Service Center
800-923-8282

Social media: @uscensusbureau
#ACSdata

ACS:
acso.users.support@census.gov

Geography:
geo.geography@census.gov

Source Us:

U.S. Census Bureau's [YYYY – YYYY] American Community Survey
[1/5]-year [estimates/statistics/data release]

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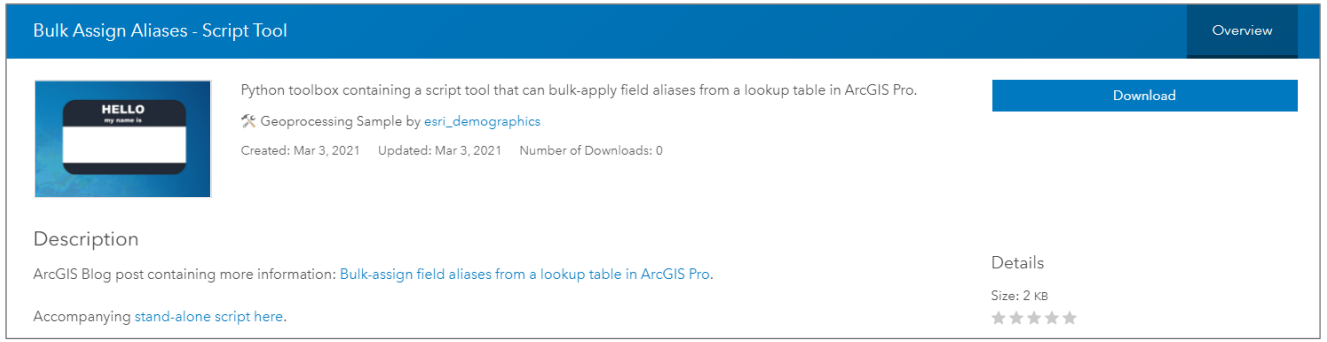
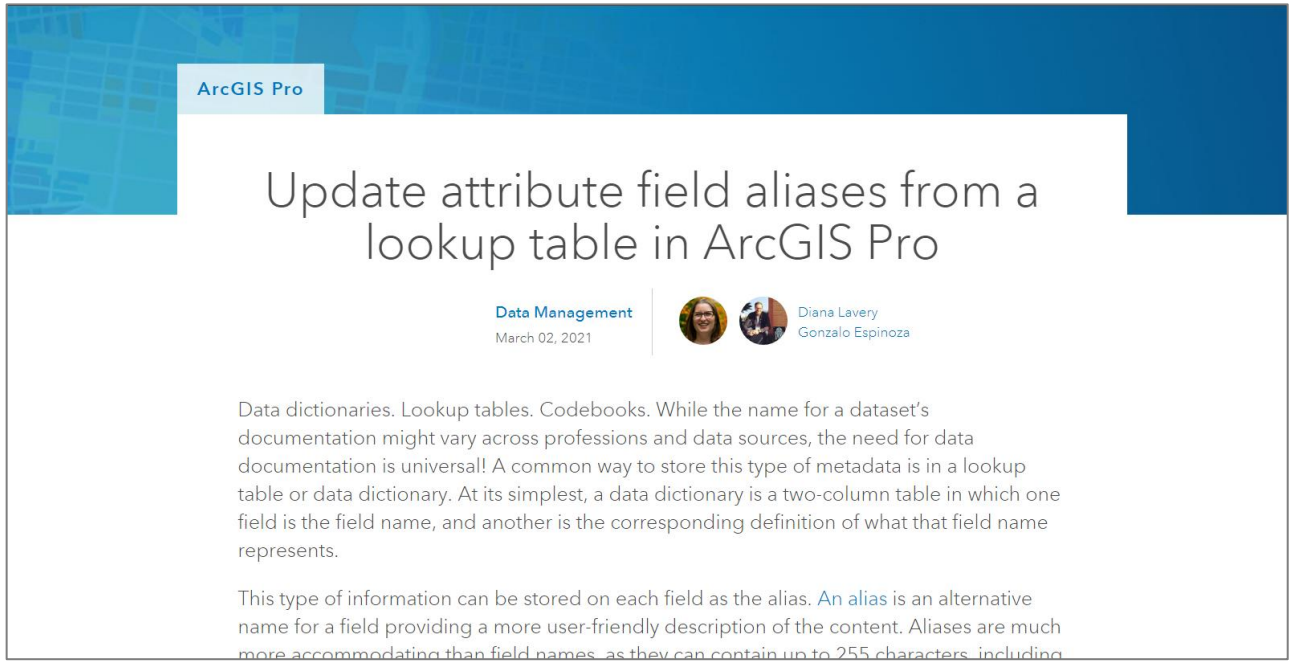
Bulk-Assign Aliases - Script Tool



Script tool available for download: https://www.arcgis.com/home/item.html?id=c238f18683644e94bf39b6e441a2f09f



Blog post with more information: https://www.esri.com/arcgis-blog/products/arcgis-pro/data-management/bulk-assign-field-aliases/

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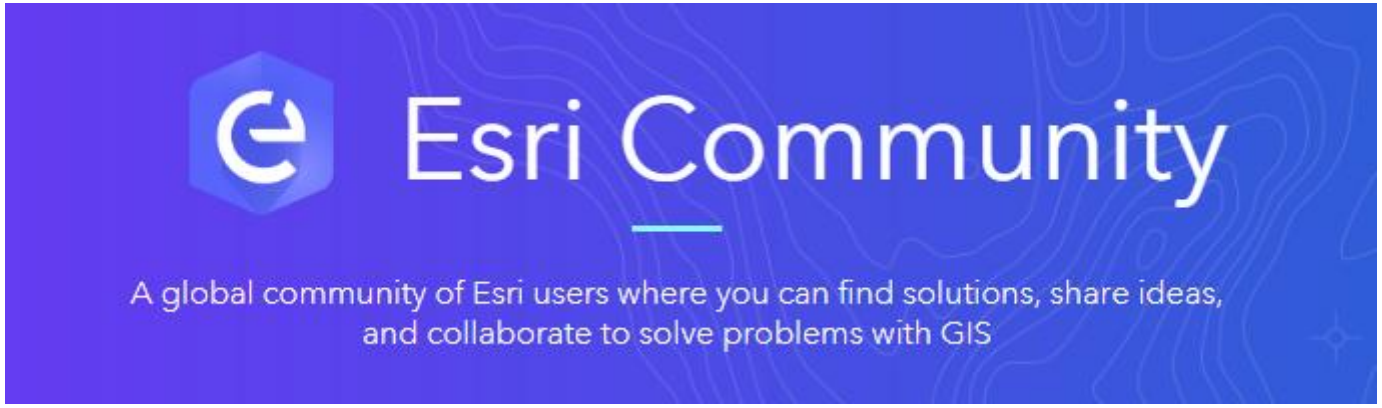
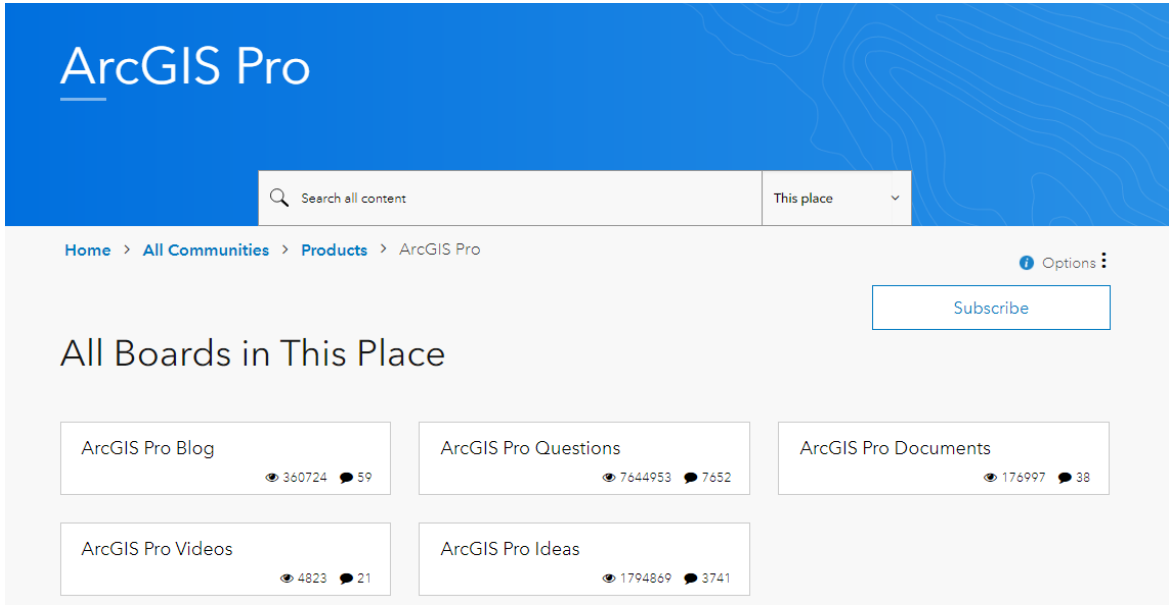
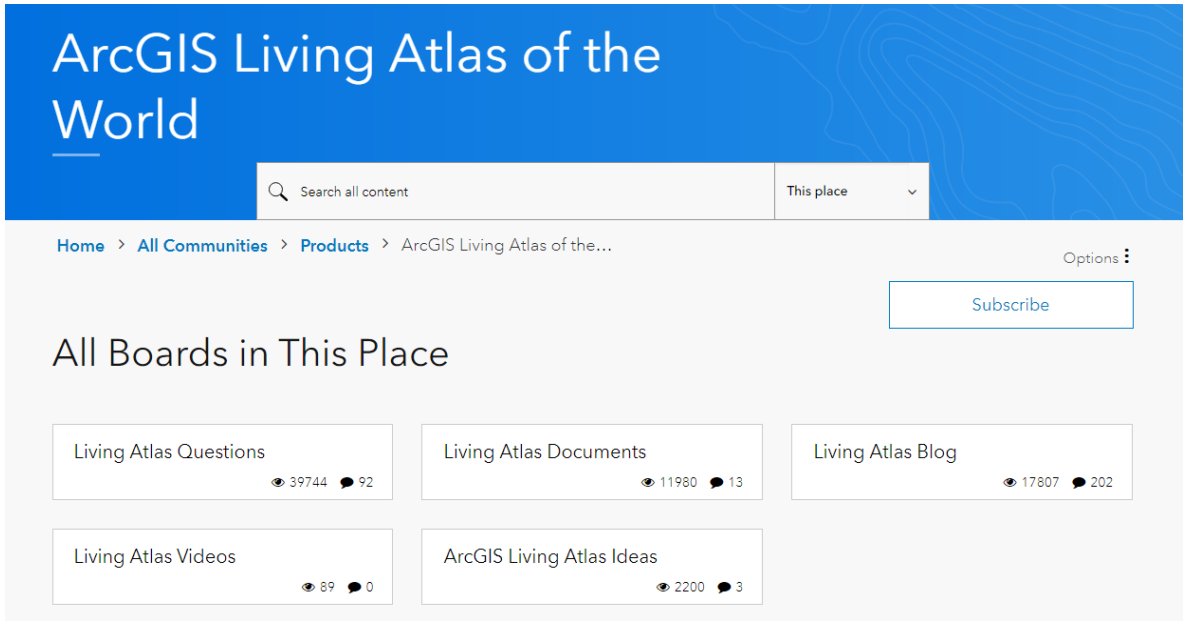


community.esri.com





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